

WHAT IS CLAIMED IS:

1. An item locator system having both voice activation and voice responsive capabilities for location feedback to locate one or more specific items, which comprises:

a.) a plurality of sets of different items,  
each set having at least one item  
therein, each set having a specified  
location, and each set having its own  
unique item-identifying bar code, with  
at least one item of each set having  
said unique item-identifying bar code  
located thereon;

b.) a plurality of specified locations,  
each location having at least one of  
said plurality of sets of different

items located thereat, each location of said plurality of locations having a unique location-identifying bar code, each of said plurality of locations having a said unique location-identifying bar code physically situated on at least one item from each set of items which is located at that location;

- c.) a support structure, for physically supporting said system at one or more locations, and functionally containing or connected to the following components:
- d.) a continuous speech recognition digital signal processor (DSP);

- e.) a programmable microprocessor  
interfaced with said speech recognition  
DSP;
- f.) sufficient programming and circuitry  
contained within said programmable  
microprocessor to provide for voice  
activation and voice recognition and  
response, and having item-  
identification/corresponding location-  
identification data pairs obtained from  
said unique item-identifying bar codes  
and said unique location-identifying  
bar codes, so as to provide item  
location information to a user;
- g.) voice input means connected to said  
speech recognition DSP;

- h.) memory storage means connected to said programmable microprocessor for storage of operational inputs, control inputs, voice recognition vocabulary for storage of command match and execute functions; and,
- i.) at least one user feedback unit and connection from said programmable microprocessor to said at least one user feedback unit, said at least one user feedback unit adapted to provide feedback selected from the group consisting of audio feedback, visual feedback and combinations thereof, to a user in response to an item location query.

2. The system of claim 1 wherein said unique item-identifying bar code is a universal price code bar code.

3. The system of claim 1 wherein said unique location-identifying bar code is a bar code which corresponds to a location selected from the group consisting of aisle, row, shelf, bin, drawer and floor space area.

4. The system of claim 1 wherein said unique location-identifying bar code is a bar code which includes code for genus data and for species data.

5. The system of claim 4 wherein said genus

data is row or aisle data, and said species data is bin, drawer or shelf data.

6. The system of claim 1 wherein said programming includes software which is capable of receiving bar code reader inputs and converting same to item-identification/corresponding location-identification data pairs for location information.

7. The system of claim 1 wherein said user feedback unit includes visual display means for viewing visual feedback in the form of text, or map or a combination thereof.

8. The system of claim 1 wherein said user feedback unit includes sufficient hardware and software to provide audio feedback to a user in response to recognizable voice input.

9. The system of claim 1 wherein said memory storage means further includes flash ROM storage and provides for remote diagnostics and system programming.

10. The system of claim 1 wherein said voice input means includes a microphone.

11. The system of claim 1 which further includes a secured manual control panel for input and management of item and location data into said system.

12. The system of claim 11 wherein said manual control panel further contains a keypad and menu for operation and programming options, a microphone, a screen for input and feedback display.

13. The system of claim 1 which additional components further includes an audio feedback component which includes audio feedback hardware and software adapter to audibly respond to recognizable voice input, including digital-to-analog conversion and an output speaker.

14. The system of claim 1 wherein said DSP includes a continuous speech recognition engine having a continuous speech signal recognizer and a continuous speech signal interpreter.



15. The system of claim 14 wherein said continuous speech recognition engine utilizes tokens of raw acoustic signals representing utterances or words and matches these against a set of models and then relies upon likelihood to select a most likely model to decode signals for interpretation.

16. The system of claim 1 which further includes at least one bar code reader connected to said microprocessor, and said connected is selected from being directly connected and being wirelessly connected to said microprocessor.

17. The system of claim 6 which further includes at least one bar code reader connected

to said microprocessor, and said connected is selected from being directly connected and being wirelessly connected to said microprocessor.

18. The system of claim 1 which further includes a secondary processor, said secondary processor being adapted to receive and translate bar code reader inputs thereto and having sufficient software to create item location information by matching item-identification bar code readings and corresponding location-identification bar code readings, and to communicate with said microprocessor.

19. The system of claim 18 which further includes at least one bar code reader connected

to said secondary processor, and said connected is selected from being directly connected and being wirelessly connected to said secondary processor.

20. The system of claim 18 wherein said secondary processor is adapted to convert said item location information into continuous speech recognition digital signals.